

Choosing a region-of-interest with **Giovanni-4**

The following slides demonstrate how to choose a region-of-interest with the Giovanni-4 interface

How a region-of-interest is selected with Giovanni-3

Select:

Spatial

Cursor Coordinates: -96.24375, 43.80000

Move map in steps →

Zoom in- zoom out controls →

Hand tool (slide map) →

Magnify area (select and zoom) →

Region selection →

The region is selected by clicking-and-dragging on the map to define a rectangular area

Area of Interest: West: -124.744 North: 43.125 South: 33.675 East: -117.844 Update Map

The screenshot shows the Giovanni-3 Spatial tool interface. On the left, a vertical toolbar contains icons for moving the map in steps, zooming in and out, using a hand tool to slide the map, magnifying an area, and selecting a region. Arrows point from these labels to their respective icons. The main map area displays a satellite view of the United States with a yellow rectangular region of interest selected over the central part of the country. A blue arrow points from a text box to this region. Below the map, a status bar shows the 'Area of Interest' with input fields for West (-124.744), North (43.125), South (33.675), and East (-117.844), along with an 'Update Map' button. A large blue arrow points from a text box at the bottom to these input fields.

The lat-lon boundaries for the selected region are shown here. They can also be entered directly; Click "Update Map" to show the selected region when lat-lon is entered directly.

How a region-of-interest is selected with Giovanni-4

The Giovanni-4 interface

Giovanni The Bridge Between Data and Science v 4.10 [Release Notes](#) [Browser Compatibility](#) [Known Issues](#)

Select Plot
Choose a plot type.


☒ **Maps: Time-Averaged** ☐ Comparisons: Select... ☐ Time Series: Select... ☐ Vertical: Select... ☐ Miscellaneous: Select...

Select Date Range (UTC)
Format: YYYY-MM-DD.

- 00 hrs to - 23 hrs

Valid Range: 1979-01-01 to 2014-11-21

Select Region (Bounding Box)
Format: West, South, East, North

-180, -90, 180, 90 

Select Variables

▼ Disciplines

- ☐ Aerosols (118)
- ☐ Atmospheric Chemistry (12)
- ☐ Atmospheric Dynamics (62)
- ☐ Hydrology (16)
- ☐ Water and Energy Cycle (26)

▼ Measurements

- ☐ Aerosol Index (1)
- ☐ Air Pressure (4)
- ☐ Air Temperature (14)
- ☐ Albedo (5)
- ☐ Altitude (4)
- ☐ Angstrom Exponent (16)
- ☐ Atmospheric Moisture (20)
- ☐ CH4 (4)
- ☐ CO (4)
- ☐ Cloud Fraction (4)
- ☐ Cloud Properties (9)

Number of matching Variables: 0 of 219

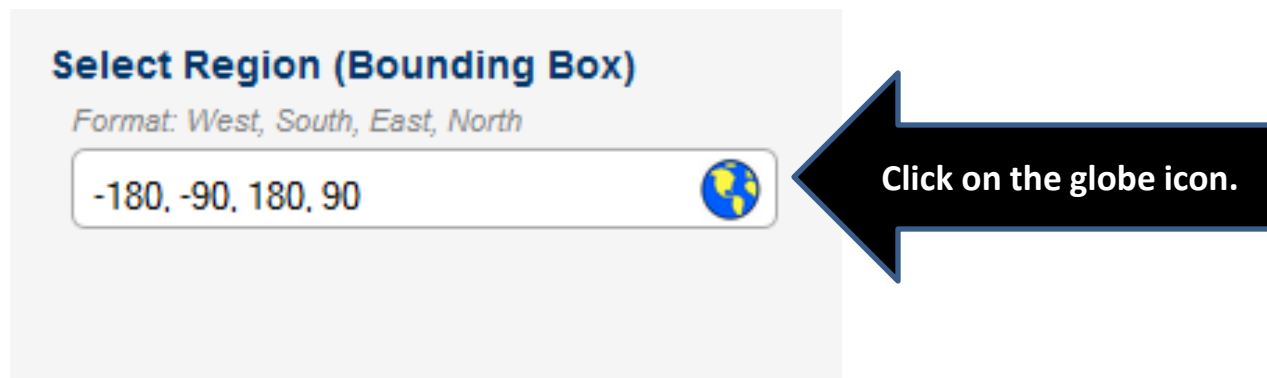
Total Variable(s) included in Plot: 0

Keyword:

The region-of-interest is selected here.

Step 1

To select a region-of-interest, this tool on the Giovanni-4 interface will be used.



Step 2

Clicking the globe icon produces the world map that is used for region-of-interest selection.

Range (UTC)
MM-DD. 00 hrs to 23 hrs

Select Region (Bounding Box)
Format: West, South, East, North
-180, -90, 180, 90

Region selection

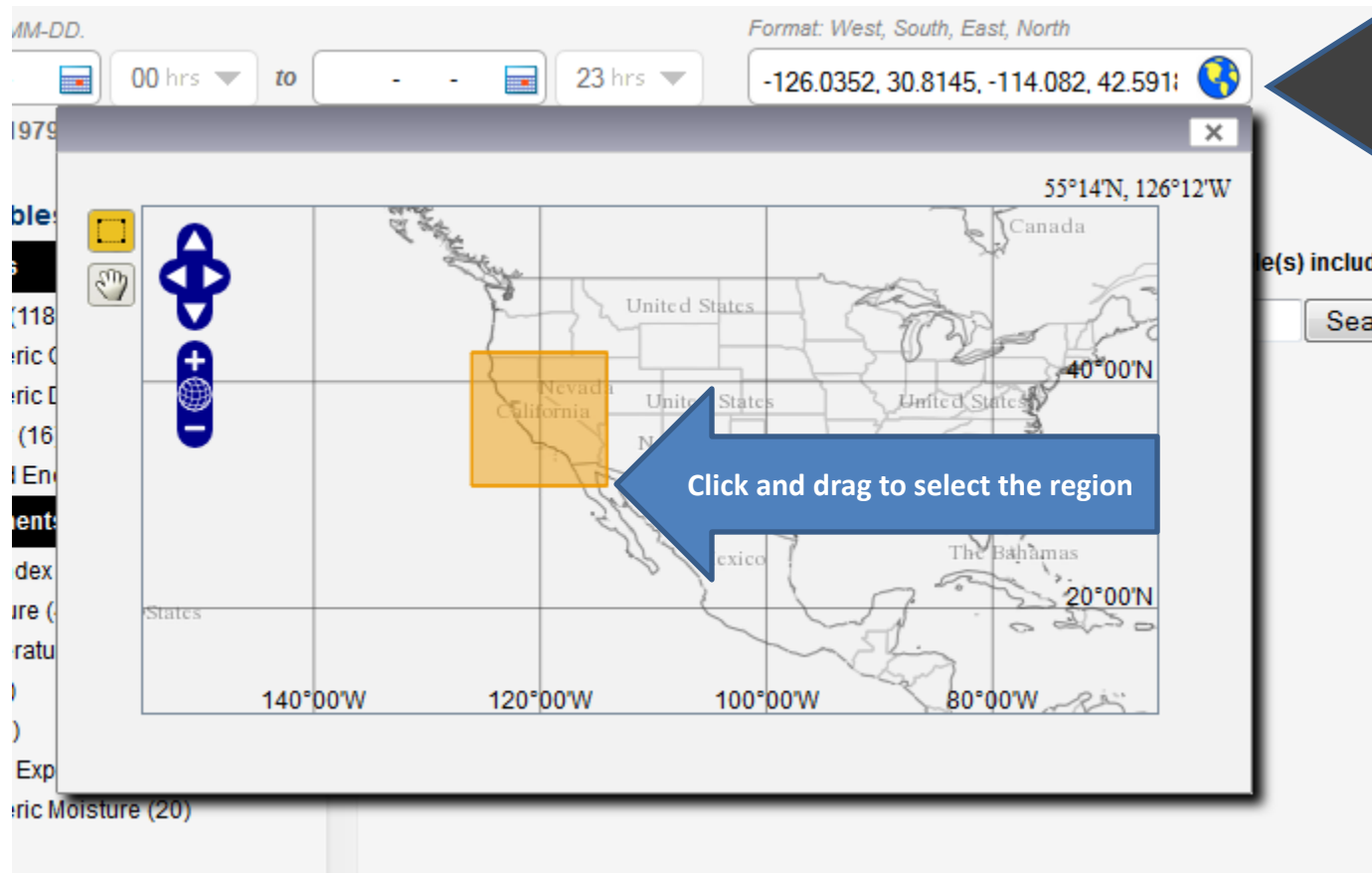
Hand tool (slide map)

Move map in steps

Zoom in- zoom out controls

Step 3

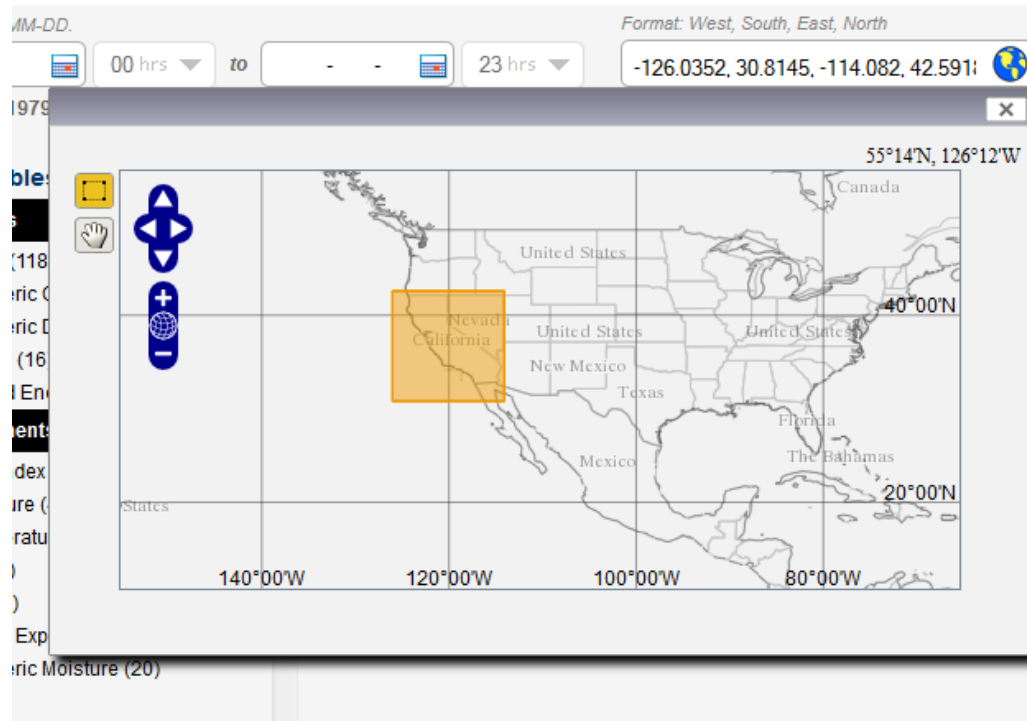
The click-and-drag region selection is similar to Giovanni-3.



When the region is selected, the lat-lon boundaries appear in this box.

They can also be entered or adjusted manually from the keyboard; after they are typed in, hitting "Enter" will refresh the region-of-interest on the map.

Step 4



Clicking the "X" will minimize the map ...

... but the lat-lon boundaries are still selected. They are also now part of the shareable URL for this Giovanni-4 session.

Select Region (Bounding Box)

Format: West, South, East, North

`-126.0352, 30.8145, -114.082, 42.5911`

Part 2:

Choosing a region-of-interest with shapefiles

A new option for region selection is the use of 'shapefiles'. Shapefiles are available for countries, U.S. states, and major world watersheds.

**Shapefile
Selection
Menu**

Select Region (Bounding Box or Shapefile)

Format: West, South, East, North

-180, -90, 180, 90

Show Map

Show Shapes

Shape Files

Countries

US States

Watersheds

Shape



Afghanistan



Albania



Algeria



American Samoa (US)



Andorra



Angola



Anguilla (UK)

Source: [HIU, US State Department](#)

Done

Clear Shape Selection

**Available
shapefiles**

NOTE:

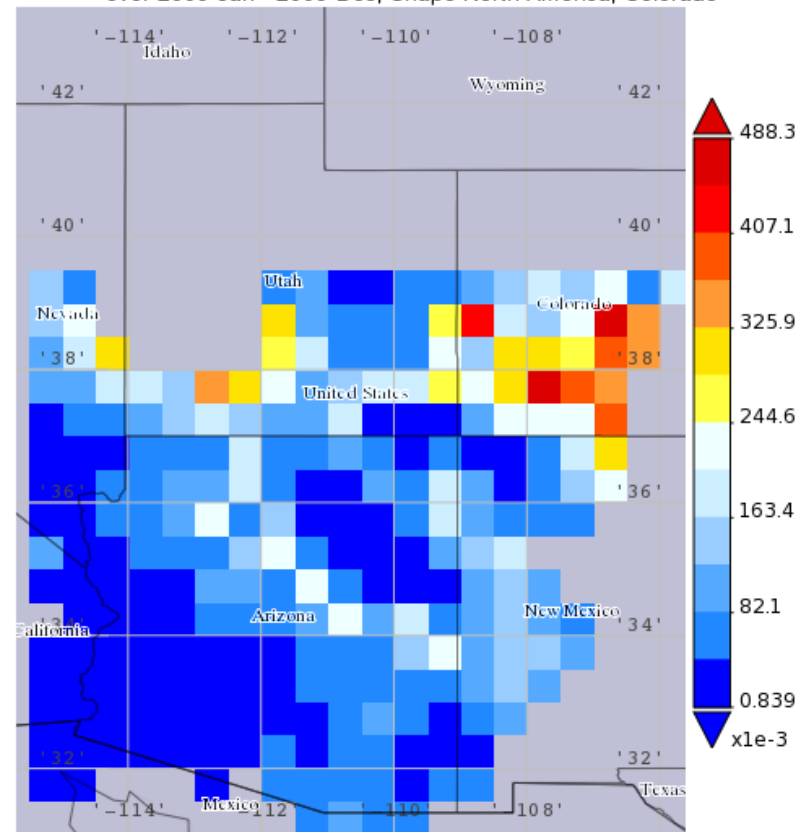
The watershed list is approximately alphabetical.

However, because there are some rivers that share the same name (an example is the Colorado), not all the names are simple.

The Colorado River watershed in the United States is named “North America, Colorado” – because a small part of it is also in Mexico.

Here is a shapefile result. The map shows the average monthly rain rate over the Colorado River watershed (in the U.S.) for the year 2009.

Time Averaged Map of Rain Rate monthly 0.5 deg. [TRMM TRMM_3A12 v7] mm/hr
over 2009-Jan - 2009-Dec, Shape North America, Colorado



- Selected region was 115.69583333333328W, 30.95416666666673N, 105.6249999999993W, 43.46250000000008N. Rain Rate monthly 0.5 deg. [TRMM TRMM_3A12 v7] mm/hr has a limited data extent of 180W, 40S, 180E, 40N. The region in the title reflects the data extent of the subsetting granules that went into making this result.

Another demonstration will show how to refine this map.

**End
of
demonstration**